

Dioxins and Furans

Work Group Co-Chairs:

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Dioxin/Furan Challenges

Canada

- 90% reduction *
- by 2000

* All media within Great Lakes Basin

United States

- 75% reduction *
- by 2006

* Aggregate of air releases nationwide and water releases within the Great Lakes Basin

Progress

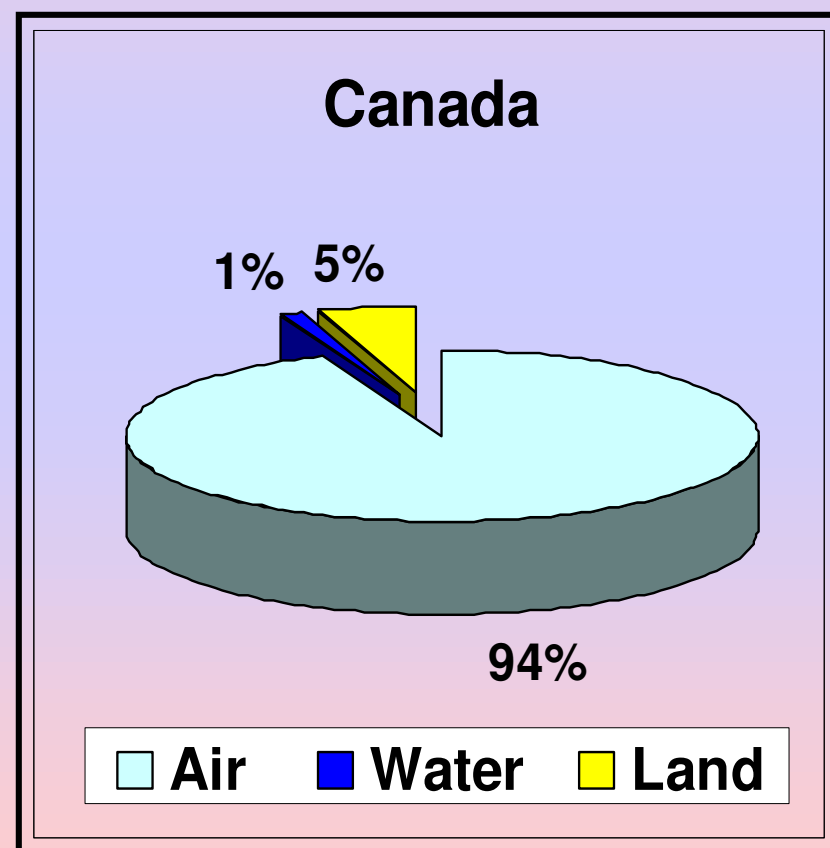
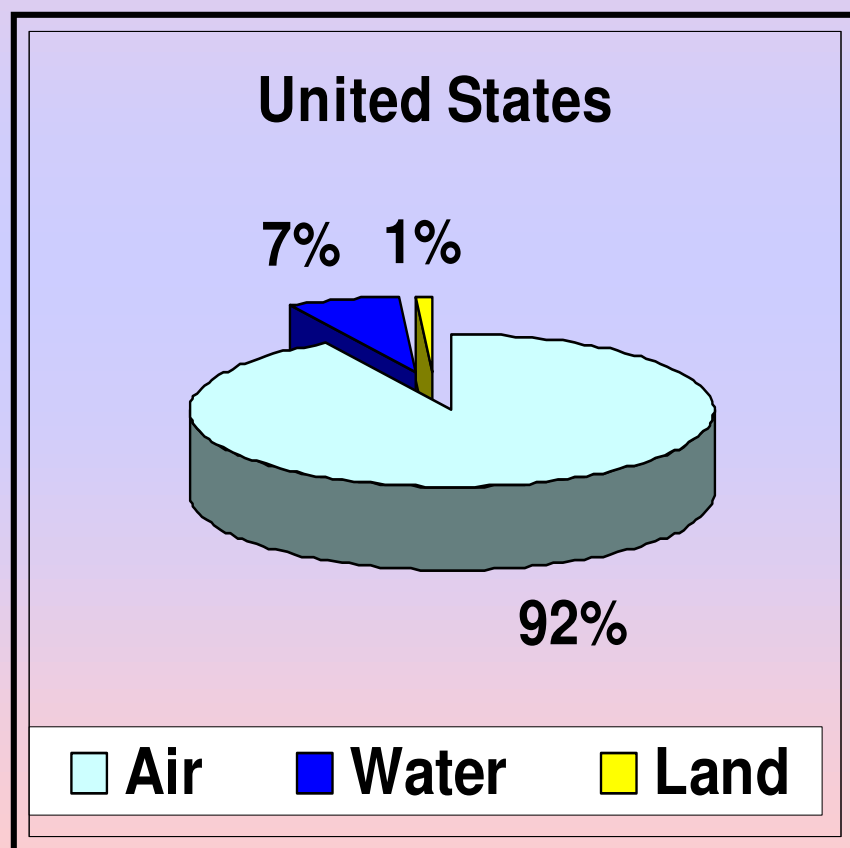
Canada:

- 84% (225 grams) reduction on total release within GL Basin
- Total release in 2003 = 41 grams

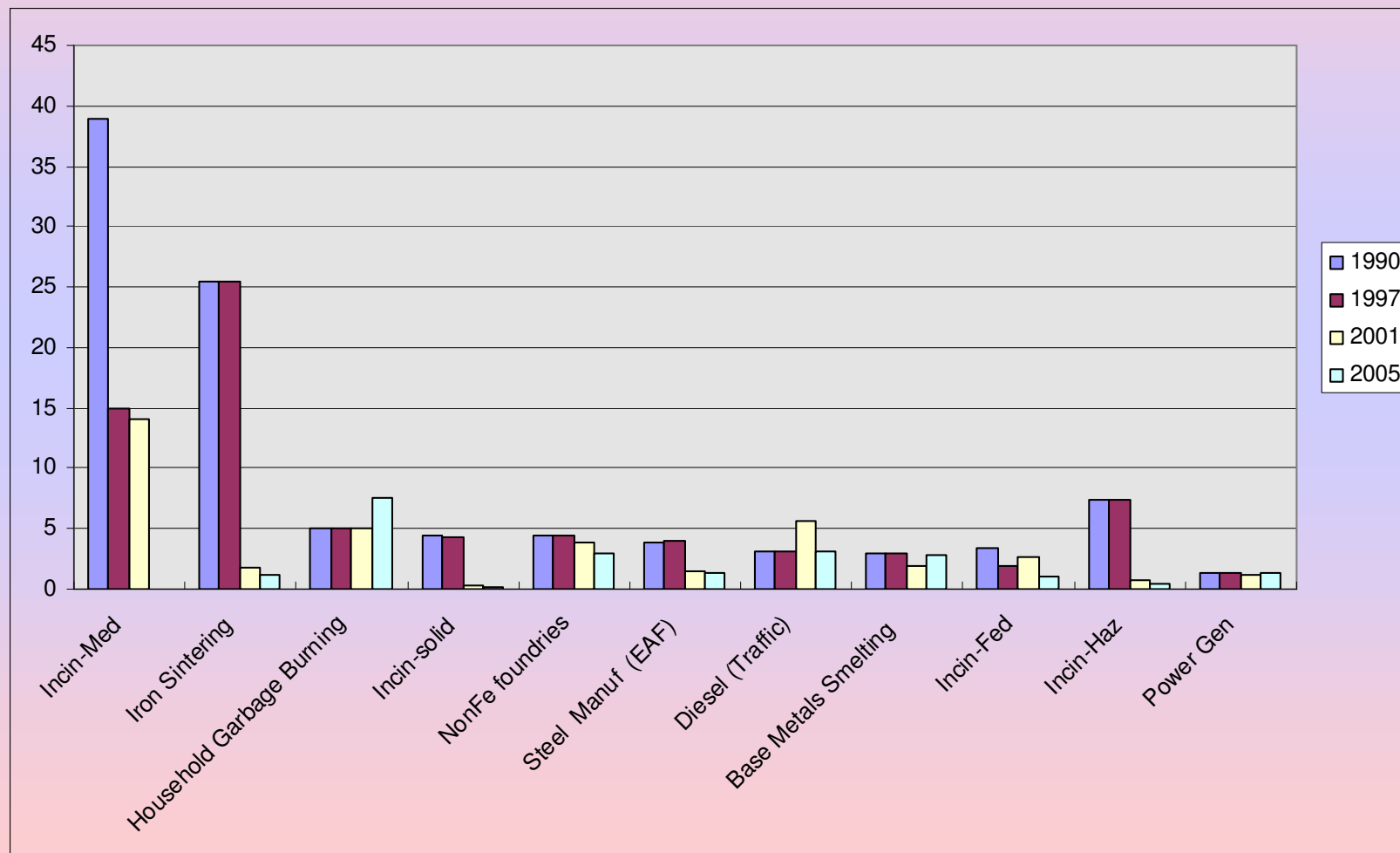
United States

- 77% (10,743 grams) reduction on total release within U.S.
- Total release in 1995 = 3,252 grams

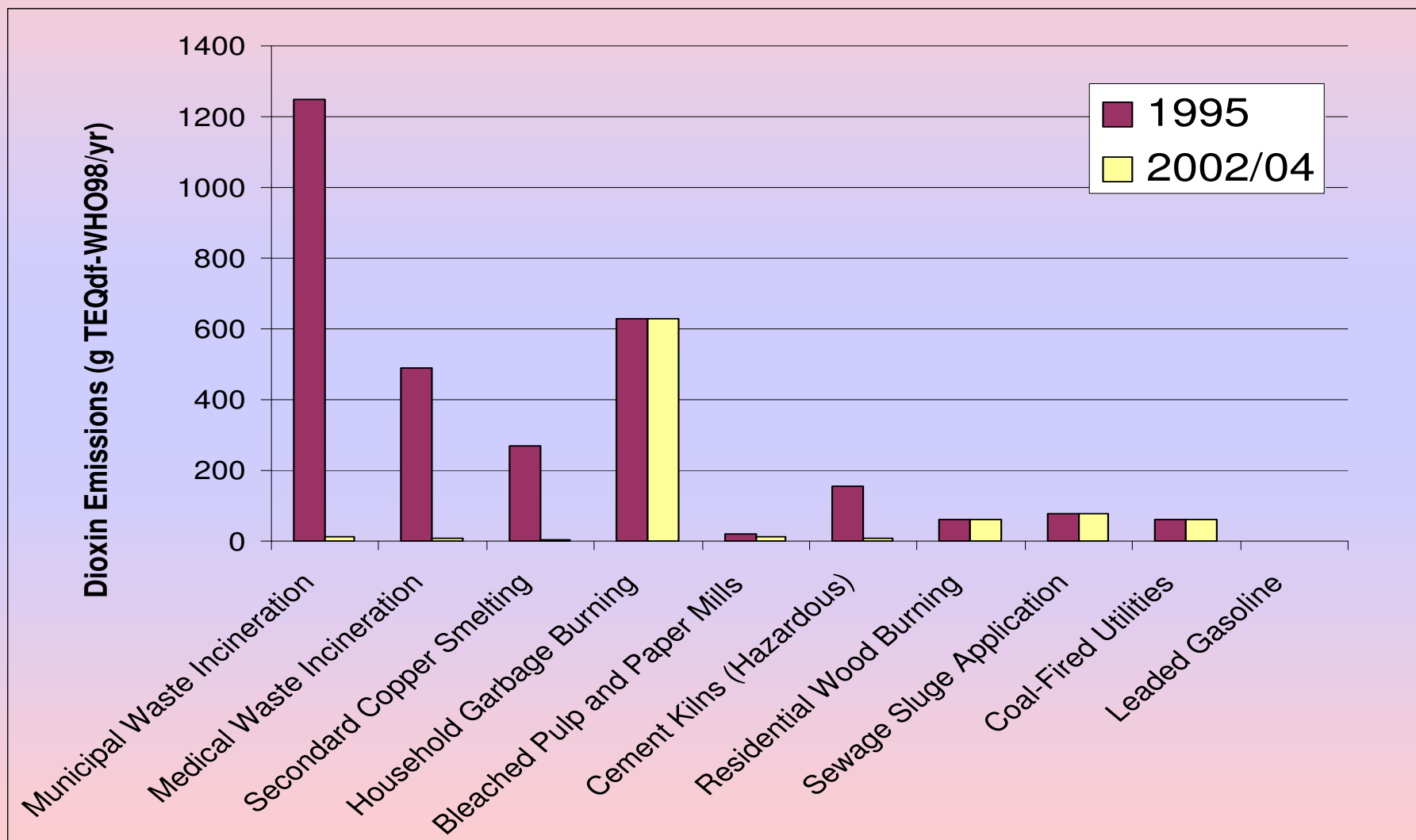
Dioxin Sources by Environmental Media



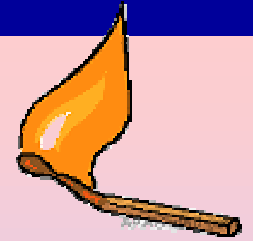
Ontario D/F Air Releases and Projection (grams per year)



Top U.S. Sources of Dioxin Emissions



Poorly Characterized Sources



- Secondary metal smelting
- Coke production
- Ceramic manufacturing
- Clay processing
- Foundries
- Asphalt mixing
- Primary magnesium
- Petroleum refineries
- Boilers
- Residential wood burning
- Crematoria
- Forest fires
- Brush fires
- Range fires
- Agricultural burning
- Landfill Fires
- Structural fires
- Ash Disposal
- Copper wire recycling
- Rural soil erosion
- Urban runoff
- Utility poles and storage yards
- Landfill fugitive emissions
- Transformer storage yards

Accomplishment Highlights

Dioxin/furan Workplan (2003-2005)

- **Highest contributing point sources are managed**
 - ◆ Pulp and paper effluents, waste incineration, steel mfg.,
- **New workplan developed to address dioxin/furan**
- **Finalized in December 2003**
 - ◆ **Characterize new sources**
 - Issue papers development underway
 - ◆ **Outreach to sources of interest**
 - ◆ **Explore pathway intervention**
 - ◆ **Investigate coplanar PCBs**
 - ◆ **Track environmental data**
 - ◆ **Continue efforts in Burn Barrel Subgroup and monitoring national programs**

Household Garbage Burning



- Includes open burning of garbage on homeowners' property in barrels, woodstoves, open pits, outdoor furnaces, etc.
- See subgroup's website at www.openburning.org for background information, emissions studies, a draft strategy to reduce this behavior, outreach materials, and more.

Household Garbage Burning

Education/Outreach

United States:

- Great Lakes National Program Office
 - ♦ Funding case study development of alternatives to trash burning
 - ♦ Working with USEPA national program to develop a community peer mentoring system
- USEPA Office of Solid Waste
 - ♦ National brochures and website
 - ♦ National outreach presentation developed
 - ♦ www.epa.gov/msw/backyard
- EPA Region 5 continues meeting with states and tribes
 - ♦ Prioritized grant funding for burn barrel projects
 - ♦ Illinois EPA and USEPA jointly presented at a state conference

Household Garbage Burning

Canada:

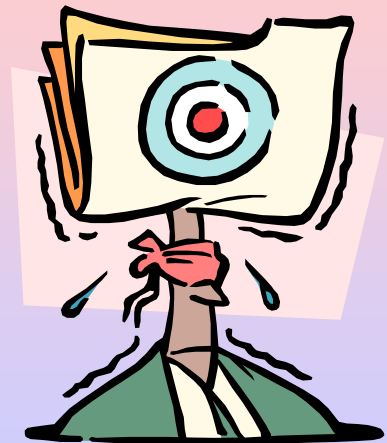
- Canadian Council Ministers of the Environment (CCME) are preparing a report "Approaches to Reducing On-Site Residential Waste Combustion"
 - ◆ Environment Canada Ontario Region - continued to support community organizations (EcoSuperior Environmental Programs, Lanark and Leeds Green Community) in the development of materials and outreach. Ontario Region brochures are available on the subgroup website www.openburning.org

Educational Outreach Information

www.airdefenders.org



Upcoming Actions



- Burn barrel activities updates
- Compare dioxin air monitoring protocols
- Results of open burning study
- Results of industry source study
- Identify sources that warrant further investigation and engage these sectors
- Joint efforts with other workgroups